

Best Management Strategies for Potential Contaminants Identified within a Drinking Water Source Protection Area

Best Management Strategies (BMP's)	Contaminant Source ID's	Contaminant Source ID's	Contaminant Source ID's	Contaminant Source ID's
General BMP's for all Activities				
Avoid the activity or reduce its occurrence.	All	All	All	All
Move the activity indoors.	All	All	All	All
Use less material.	All	All	All	All
Use least toxic material available.	All	All	All	All
Create and maintain vegetative areas near activities.	All	All	All	All
Locate activities as far as possible from surface drainage paths.	All	All	All	All
Keep storm drain systems clean.	All	All	All	All
Reduce, reuse and recycle as much as possible.	All	All	All	All
Be an advocate for stormwater pollution prevention.	All	All	All	All
Report Violators.	All	All	All	All
Cleaning, Washing and Industrial Activities				
Cleaning and washing of tools, engines and manufacturing equipment .	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Illicit connections to stormwater drains should be eliminated.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Employees should be educated.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
All wastewater should be dishcharged to a holding tank, process treatment system, or sanitary sewer. Never discharge to septic system or stormwater drains.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
If soaps and detergents are used, use least toxic chemical capable of doing the job.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Use non-phosphate detergents, if possible.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Limit the amount of water used for washing activities to limit the potential runoff of carrying pollutants beyond the designated wash pad or capture system.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Recycle wash water for subsequent washings.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Implement one of following stormwater treatment BMP's:	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Oil water separator.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Wet vault for settling.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Infiltration Basin.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Filtration for media designed for pollutant present.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Catch basin with a filter insert for pressure washing.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Paved wash area should be swept daily.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Greasy buildup on cooking equipment must be removed and properly disposed of prior to washing to reduce the amount of material that can contaminate runoff.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Use a tub or similar device to contain washwater.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
If activity can not be moved indoors or contained by a tub, the washing area must drain to a sanitary sewer, holding tank or process treatment system and provisions should be made to prevent stormwater run-off onto the washing area.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
If a holding tank is used, the contents must be pumped and disposed of appropriately.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
A cover should be placed over wash area to prevent rain from falling on dirty equipment and producing contaminated runoff.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Take vehicles to commercial car wash.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Designated wash areas must be marked well, with signs indicated where and how washing should occur. Any inlets to sanitary sewer or storm drain should be marked "No Dumping".	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Clean catch basins regularly.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Consider washing vehicles less frequently.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
If pressure washing waste water doesn't collect in a centralized area, such as an area that is very flat, or you are on a grassed area, a tarp should be placed under the washing area to collect paint chips and other debris that may be loosened by the spray.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Pressure washing of boats should occur where runoff control can be achieved.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous

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Spread filter fabric under object being washed.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Spill cleanup material should be stocked near liquid transfer area and employees should be trained in emergency spill response procedures and correct use of spill clean up materials.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
If a sump or holding tank is used for spill containment, its contents should be pumped out and disposed of appropriately.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Drip pans should be provided underneath hose and pipe connections and other leak prone areas during liquid transfer operations. Drip pans should be cleaned regularly and stored nearby transfer area.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
A trained employee should be present during loading and unloading of materials.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Use a temporary storm drain cover during transfer of materials.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Pumps and hoses used for liquid transfer should be in good condition.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Cover transfer area with roof to avoid rain contact.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
A designated area for liquid transfer could be paved and sloped to a sump or holding tank to facilitate capture.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
If a liquid transfer area can not be paved, then a containment/run-on structure such as a curb, dike or berm should be provided.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Implement an inventory control system to track purchase and consumption of liquids.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
If paving the fuel transfer area, use Portland Cement because asphalt deteriorates.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Do not hose down maintenance repair areas. Instead sweep weekly to collect dirt and use absorbent pads to collect spills.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
If transfer occurs at temporary site, a tarp, cloth or drip pan should be used.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Drain all fluids from wrecked vehicles and remove coolants.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Sweep all driveways and gutters that show an accumulation of materials.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
A catch basin insert filter should be used during rainy weather.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Painting, finishing and coating materials should be stored in areas protected from the rain .	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Never clean brushes, equipment into storm drain, gutters, ditch, stream or other water body.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Properly dispose of hazardous wastes.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Wood treatment should not occur during rain or when rain is expected.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Keep treated wood away from surface drainage areas.	Waste Water Disposal (D01-D62)	Industrial (I01-I36)	Commercial Activities (C01-C44)	Miscellaneous
Agricultural Activities				
Maintain ground cover.	Agricultural Sources (A01-A10)			
Practice conservation tillage.	Agricultural Sources (A01-A10)			
Practice conservation coverage.	Agricultural Sources (A01-A10)			
Utilize contour farming.	Agricultural Sources (A01-A10)			
Plant critical areas.	Agricultural Sources (A01-A10)			
Plant and maintain vegetative buffers and filter strips.	Agricultural Sources (A01-A10)			
Practice conservation irrigation.	Agricultural Sources (A01-A10)			
Use integrated pest management activities.	Agricultural Sources (A01-A10)			
If possible crops should be planted away from surface drainages.	Agricultural Sources (A01-A10)			
Contact NRCS for developing fertilization schedules.	Agricultural Sources (A01-A10)			
Proper pesticide application should be followed.	Agricultural Sources (A01-A10)			
Never apply pesticides, herbicides, fungicides when rain is expected.	Agricultural Sources (A01-A10)			
Do not apply chemicals when it is windy.	Agricultural Sources (A01-A10)			
Use manual pest control procedures.	Agricultural Sources (A01-A10)			
Pesticide application should not occur within 200 of surface water.	Agricultural Sources (A01-A10)			
Store pesticide, herbicides and fungicides in protected areas.	Agricultural Sources (A01-A10)			
Compost material should be kept away from surface drainage.	Agricultural Sources (A01-A10)			

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Fuel Storage				
Replace leaking and deteriorating tanks with good tanks.	Petroleum Storage Tanks (T01-T24)	Miscellaneous		
Tanks should have overflow detection.	Petroleum Storage Tanks (T01-T24)	Miscellaneous		
Spilled liquids should be collected and disposed appropriately.	Petroleum Storage Tanks (T01-T24)	Miscellaneous		
Use double walled tanks.	Petroleum Storage Tanks (T01-T24)	Miscellaneous		
Do not store containers in direct contact with the ground.	Petroleum Storage Tanks (T01-T24)	Miscellaneous		
Use funnels to pour fuel.	Petroleum Storage Tanks (T01-T24)	Miscellaneous		
Demolitions				
Schedule demolitions to take part in dry part of year.				
Light spraying of water can control some of the dust.				
Logging				
Preserve vegetation along streams.	Natural Resource Extraction Activities (E01-E12)	Miscellaneous		
Logging road should have crushed rock or spall apron construction.	Natural Resource Extraction Activities (E01-E12)	Miscellaneous		
Avoid logging on steep slopes.	Natural Resource Extraction Activities (E01-E12)	Miscellaneous		
Drainage ditches and culverts should direct runoff into vegetated areas or stormwater treatment systems.	Natural Resource Extraction Activities (E01-E12)	Miscellaneous		
Mining/Natural Resource Extraction:				
If the material is appropriate, use excavated spoil material to form compacted beams along the down slope sides to contain runoff.	Natural Resource Extraction Activities (E01-E12)	Miscellaneous		
Semi-permanent stockpiles should be seeded to promote vegetation growth to limit erosion from stockpiles.	Natural Resource Extraction Activities (E01-E12)	Miscellaneous		
Use detention ponds to promote settling of suspended solids or infiltration basins to filter suspended solids, to clean up runoff before it leaves the site.	Natural Resource Extraction Activities (E01-E12)	Miscellaneous		
Use anchorage tarps to cover stockpiles at small-scale mining operations.	Natural Resource Extraction Activities (E01-E12)	Miscellaneous		
		Miscellaneous		
Residential BMP's				
Wash your car directly over your lawn or make sure wash water drains to a vegetative area. This allows the water and soap to soak into the ground instead of running off into a local water body.	Residential Sources (R01-R09)	Miscellaneous		
Select soap without phosphates.	Residential Sources (R01-R09)	Miscellaneous		
Sweep driveways and street gutters before washing vehicle to clean up dirt, leaves, trash and other materials that may flow to the storm drain along with your wash water.	Residential Sources (R01-R09)	Miscellaneous		
Commercial products are available that allow you to clean a vehicle without water.	Residential Sources (R01-R09)	Miscellaneous		
Use a nozzle on your hose to save water.	Residential Sources (R01-R09)	Miscellaneous		
Do not wash your car is rain is expected.	Residential Sources (R01-R09)	Miscellaneous		
Consider not washing your car at home.	Residential Sources (R01-R09)	Miscellaneous		
Recycle all oils, antifreeze, solvents and batteries.	Residential Sources (R01-R09)	Miscellaneous		
Never dump new or used automotive fluids or solvents on the ground, in a storm drain or street gutter, or in a water body. Eventually, it will make its way to local surface waters or groundwater.	Residential Sources (R01-R09)	Miscellaneous		
Do not mix wastes. The chlorinated solvents in some carburetor cleaners can contaminate a huge tank of used oil, rendering it unsuitable for recycling. Keep wastes in separate containers and properly labeled.	Residential Sources (R01-R09)	Miscellaneous		
To dispose of oil filters, punch a hole in the top and let drain for 24 hours. This is where a large funnel in the tip of your oil storage container will come in handy. After draining, wrap in 2 layers of plastic and dispose of in your regular garbage or recycle by taking it to the household hazardous waste line.	Residential Sources (R01-R09)	Miscellaneous		
Use care in draining and collecting antifreeze.	Residential Sources (R01-R09)	Miscellaneous		
Perform your service activities on concrete or asphalt.	Residential Sources (R01-R09)	Miscellaneous		
If doing body work outside, be sure to use a tarp to catch material resulting from grinding, sanding and painting. Double bag wastes.	Residential Sources (R01-R09)	Miscellaneous		
Follow manufacturer's directions when applying fertilizers.	Residential Sources (R01-R09)	Miscellaneous		
Consider planting a vegetative buffer zone.	Residential Sources (R01-R09)	Miscellaneous		

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Store all fertilizers and pesticides in covered location.	Residential Sources (R01-R09)	Miscellaneous		
Compost yard clippings.	Residential Sources (R01-R09)	Miscellaneous		
Pull weeds instead of spraying.	Residential Sources (R01-R09)	Miscellaneous		
Work fertilizers into the soil.	Residential Sources (R01-R09)	Miscellaneous		
Dispose of hazardous material and their containers properly.	Residential Sources (R01-R09)	Miscellaneous		
Store hazardous material off of the ground and away from children.		Miscellaneous		
Use ground cloths and drip pans when working outdoors with hazardous materials.	Residential Sources (R01-R09)	Miscellaneous		
Let latex paints dry before placing in garbage.	Residential Sources (R01-R09)	Miscellaneous		
Use less toxic products whenever possible.	Residential Sources (R01-R09)	Miscellaneous		
Follow manufacturer's directions in the use of all materials.	Residential Sources (R01-R09)	Miscellaneous		
When hazardous material are used, place inside a tub or bucket to minimize spills.	Residential Sources (R01-R09)	Miscellaneous		
Properly maintain septic systems.	Residential Sources (R01-R09)	Miscellaneous		
Monitor septic systems for signs of failure: odors, surface sewage or green areas.	Residential Sources (R01-R09)	Miscellaneous		
Pump septic systems out every two to five years depending on hydraulic loading.	Residential Sources (R01-R09)	Miscellaneous		
Garbage disposal increase the need for increase pumping of solids.	Residential Sources (R01-R09)	Miscellaneous		
Household chemicals such as solvents, drain cleaners, oils, pants, pharmaceuticals, and pesticides can interfere with the proper operation of septic systems.	Residential Sources (R01-R09)	Miscellaneous		
Vehicles and heavy equipment should be kept off the drainfield.	Residential Sources (R01-R09)	Miscellaneous		
Trees should not be planted in drainfield.	Residential Sources (R01-R09)	Miscellaneous		
Clean up your dog poop and horse manure.				
Wells and Boreholes				
Identify abandoned wells and boreholes and properly decommission.	Wells and Boreholes (W01-W09)	Miscellaneous		
Assure that all wells and boreholes are properly grouted and are securely sealed.	Wells and Boreholes (W01-W09)	Miscellaneous		
Assure that all wells and boreholes are properly constructed.	Wells and Boreholes (W01-W09)	Miscellaneous		
Educate community about the implications of abandoned wells.	Wells and Boreholes (W01-W09)	Miscellaneous		
Natural Products Processing/Storage				
Storage of soil, wood chips, saw dust, gravel, sand, salt should be covered.	Natural Products Processing/Storage (N01-N10)	Miscellaneous		
Store solid and food wasted in containers and check for leaks.	Natural Products Processing/Storage (N01-N10)	Miscellaneous		
Restrict animal access to stream or lakes by fences.	Natural Products Processing/Storage (N01-N10)	Miscellaneous		
Military Activities				
Assure all Military activities follow State and Federal guidelines.	Military Activities			
Uncontrolled Sites				
Assure all Military activities follow State and Federal guidelines.	Uncontrolled Sites			
Educate community about the implications of the uncontrolled sites.	Uncontrolled Sites			